

REMARKS

Claims 1-19 are pending in the present application. In the Office action, claims 1-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Anderson et al. (U.S. Reg. No. H1,819). By this Amendment, the Applicants have amended claim 1, 3, 6 and 11, and have added new claim 19.

The Examiner objected to the drawings under 37 CFR 1.84(p)(5) for including a reference numeral not mentioned in the description. The Applicants thank the Examiner for her detailed review of the application. Figs. 6 and 7 have been amended to change reference numeral 66 to reference numeral 66b. A new sheet containing these changes to Figs. 6 and 7 is submitted herewith under cover of a separate letter to the Official Draftsperson. Withdrawal of the drawing objection is respectfully requested.

Independent claim 1 is amended to positively recite the operation of the sensing arrangement. In particular, claim 1 recites a bale shape monitor that includes a movable member in a bale-forming chamber adapted to move in response to growth of a bale, a pair of spaced apart rollers mounted to the movable member and rotate in response to rotation of the bale, and

a sensor arrangement associated with the rollers,
wherein the sensor arrangement is configured to sense
rotation of the rollers and to output a signal in response
to a sensed differential in the speed of rotation of the
rollers, wherein the signal indicates a differential in the
diameter of the bale in the vicinity of the rollers.

The Examiner cites Anderson et al. to show a bale shape monitor for round-shaped bales. However, the cited reference does not teach the limitations of claim 1.

Anderson et al. discloses a bale baler 10 having a shape monitor 122 that includes a transverse bar 136 in swingable support of a pair of end sensors 124 and 126 and an intermediate sensor 128 (Col. 8, line 42 and Figs. 9-12). The intermediate sensor

128 is mounted to the transverse bar 136 by a fixed arm 130 biased against a front stretch of belt 52 of the baler 10 (Col. 8, lines 42-47 and Col. 9, lines 5-8). The outside sensors 124 and 126 are mounted to the transverse bar 136 by swing arms 170 and 180 (Col. 9, lines 33-35 and lines 53-57; and Fig. 7). A normally open switch 192 couples the left end sensor 124 and the intermediate sensor 128, and a normally open switch 194 couples the right end sensor 126 and the intermediate sensor 128 (Col. 10, lines 35-56). If the diameter of the left end of the bale is less than the diameter of the middle of the bale, the arm 170 swings downward, causing the switch 192 to close a circuit and provide a signal to an indicator 204 alerting the operator (Col. 10, line 65 – Col. 11, line 9). If the bale diameter adjacent to the right end is less than the middle of the bale, the arm 180 of the sensor 126 swings downward relative to the stationary arm 130 of the intermediate sensor 128. The predetermined swing movement of arm 180 causes switch 194 to close a circuit and activate an indicator 218 to alert the operator (Col. 13, lines 29-50).

Anderson et al. discloses a bale monitor having an arrangement that senses a predetermined movement of outer swing arms 170 and 180 to indicate a differential in bale diameter. This is in direct contrast to claim 1, which specifically calls for a bale shape monitor having a sensor arrangement that provides a signal in response to a sensed differential in the speed of rotation of the rollers to indicate a differential in bale diameter in the vicinity of the rollers. While Anderson et al. shows rollers that contact the bale, the purpose of the rollers is to contact the bale to control the position of the arm 170, and the position of arm 170 is used to indicate bale diameter. There is absolutely no showing or suggestion in Anderson et al that the rotation of the rollers can be used to sense a differential in bale diameter, as claimed. In fact, Anderson et al. teaches away from the present invention, in that contact between the rollers and the bale is essential in order to control the position of the arm 170. In Anderson et al., loss of contact between the bale and one of the rollers would render the device inoperable for its intended purpose. In direct contrast, the present invention senses when rotation of one of the rollers is slowed

relative to the due to loss of contact with the bale, which indicates a lesser bale diameter at one location relative to another.

For the above reasons, claim 1 is believed to patentably define over Anderson et al. A review of the remaining references of record similarly fails to show or suggest the subject matter of amended claim 1, and claim 1 is thus believed to be allowable.

Claims 2-5 and 19 depend either directly or indirectly from claim 1 as amended and are, consequently, allowable for the same reasons set forth with respect to claim 1 as well as in view of the subject matter of each claim.

Claim 6 stands rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al. Claim 6 recites a method of detecting a differential in bale diameter in a round bale as the round bale is formed in the bale-forming chamber of a round baler, that includes, among other things, the acts of

sensing rotation of the rotatable members during formation of the bale within the bale-forming chamber;
and
outputting a signal in response to sensing rotation of the rotatable members when there is a differential in the speed of rotation of the rotatable members, wherein the differential in the speed of rotation of the rotatable members indicates a differential in bale diameter during growth of the bale within the bale-forming chamber in the vicinity of the rotatable members.

Similar to the above arguments with respect to amended claim 1, Anderson et al. does not teach or suggest sensing rotation of rotatable members during formation of the bale and outputting a signal in response to detection of a differential in the speed of rotation of the rotatable members as an indication of differential in bale diameter, as set

forth in claim 6. Hence, Anderson et al. does not teach or suggest the limitations of claim 6, such that claim 6 is believed to patentably define over Anderson et al. A review of the remaining references of record similarly fails to show or suggest the subject matter of claim 6, and claim 6 is thus believed to be allowable.

Claims 7-10 depend either directly or indirectly from claim 6 as amended and are, consequently, allowable for the same reasons with respect to claim 6 as well as in view of the subject matter of each claim.

Claim 11 defines an improvement in a round baler having a movable member that moves outward during formation of a bale, the improvement including a pair of rotatable members that rotate in response to rotation of the bale, and

a sensor arrangement associated with the rotatable members for detecting rotation of the rotatable members, wherein the sensor arrangement is configured to detect a differential in the speed of rotation of the rotatable members, and wherein the presence of a differential in the speed of rotation of the rotatable members indicates a reduced diameter of the bale in the vicinity of at least one of the rotatable members.

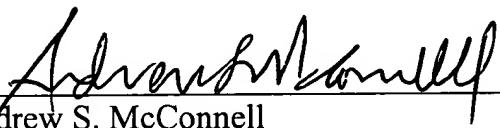
Similar to the arguments presented in connection with amended claim 1, Anderson et al. does not teach or suggest a sensor arrangement as set forth in amended claim 11 that detects rotation of the rotatable members and a differential in the speed of the rotation of the rotatable members to indicate a reduced diameter of bale, as set forth in amended claim 11. Accordingly, claim 11 is believed to patentably define over Anderson et al. A review of the remaining references of record similarly fails to show or suggest the claimed subject matter, and claim 11 is thus believed to be allowable.

Claims 12-18 depend either directly or indirectly from claim 11 as amended and are, consequently, allowable for the same reasons as well as in view of the subject matter of each claim.

The Applicants have made every effort to place the application into condition for allowance with claims 1-19, and such action is earnestly requested.

The Examiner is encouraged to contact the undersigned by phone if questions remain after consideration of this response, or if such would otherwise facilitate prosecution.

Respectfully submitted,

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